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TRAITE TRAVAIL DES LAINES

Notions indiennes — Peuples indigènes
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• DU

TRAVAIL DES LAINES

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Notions historiques, — Progrès techniques,
Développement commercial, — Classification, — Caractères,
Propriétés, — Filature,
Apprêts des fils, — Tissage, — Dégraissage, — Foutrage et Foulage,
Apprêts des lainages, — Installation d'une usine.
Prix de revient,
Comparaison entre les moyens de l'ancien
et du nouveau régime industriel.

PAR M. ALCAN

INGÉNIEUR

PROFESSEUR DE FILATURE ET DE TISSAGE AU CONSERVATOIRE IMPÉRIAL DES ARTS ET MÉTIERS
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DU CONSEIL DE LA SOCIÉTÉ D'ENCOURAGEMENT, DU COMITÉ DE LA SOCIÉTÉ DES INGÉNIEURS CIVILS
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1888

TOUTS DROITS DE REPRODUCTION ET DE REPRODUCTION RÉSERVÉS

TABLE DES PLANCHES

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— II.	Fibres animales grossies deux cents fois.
— III.	Fibres animales grossies deux cents fois.
— IV.	Expérimentateur des fils.

Épuration des laines.

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— VII.	—	Machine Peltzer, machine Chauvet.
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Dégraissage et foulage.

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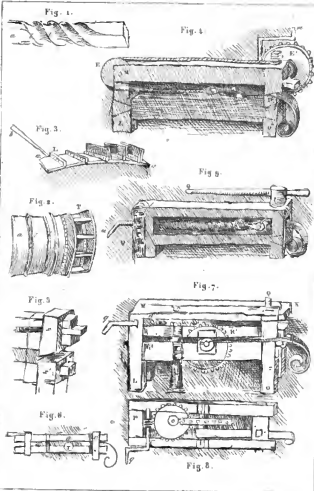
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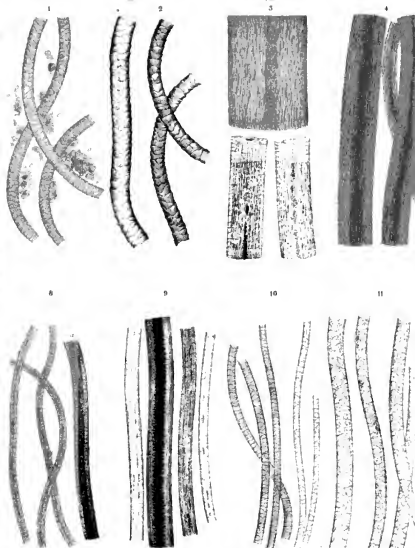
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 - LIV. Rame circulaire.
 - LV. Machine à battre.
 - LVI. Machine à plier.
 - LVII. Appareils à apprêter la bonneterie dite orientale.

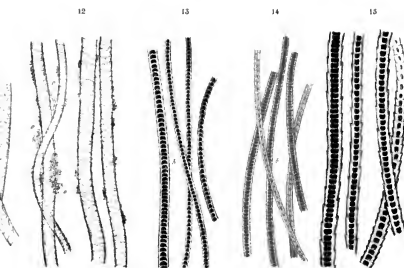
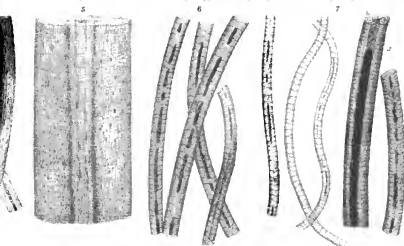


Disegno di una Tondeuse a lame elicoidali di Leonardo da Vinci.

Per Simila dei croquis originali.

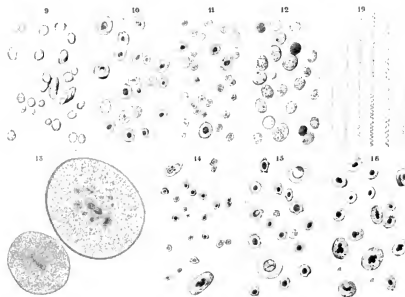
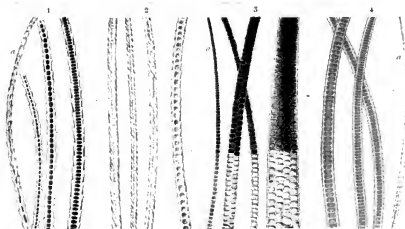
Laine.

*P. Lachetier, au nat. géol. del. et lith.*



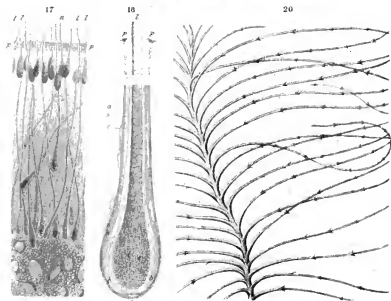
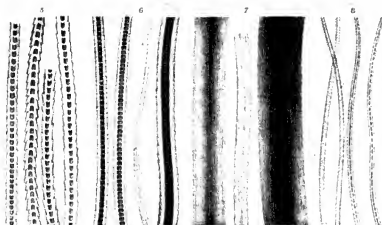
Lesqueux & Prou

Laine.



P. Linderbauer ad nat. phot. del. et lith.

Abillet et Boudry in.



Imp. Dupont à Paris

Fig. 1

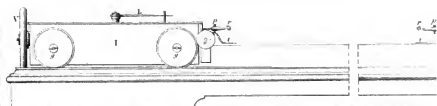


Fig. 2

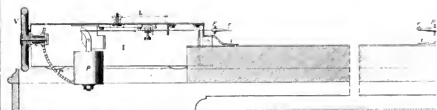
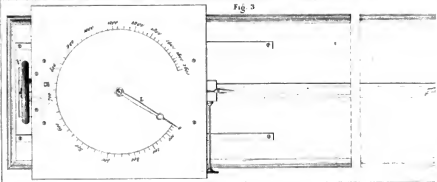
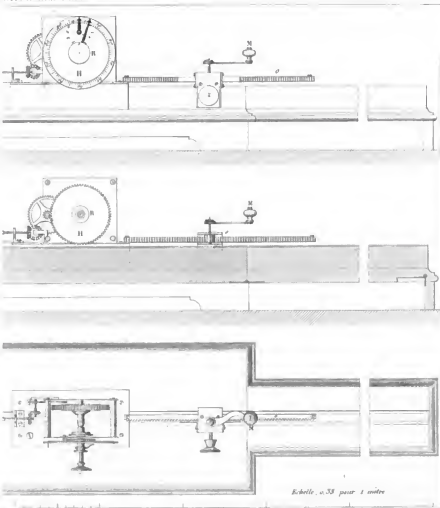
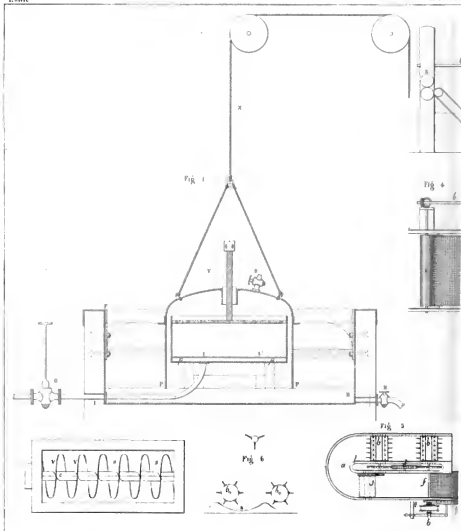


Fig. 3


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Élect. et sup^m de l'Ind.

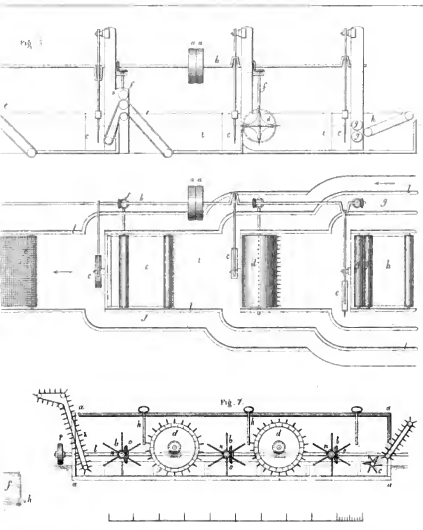


Fig 1

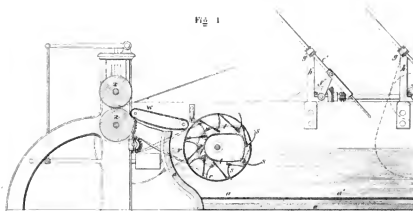
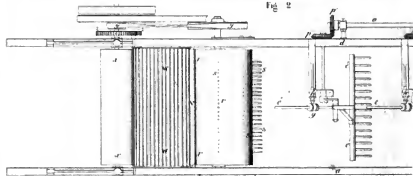
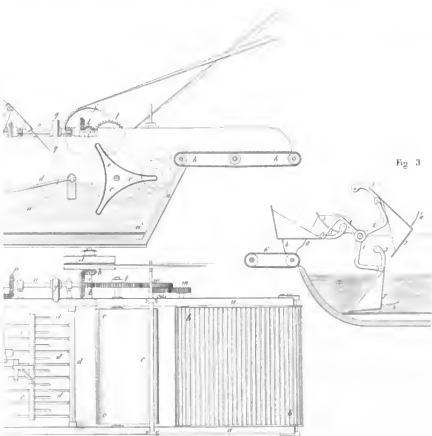


Fig 2





Machine de M. de la Roche

Fig 1

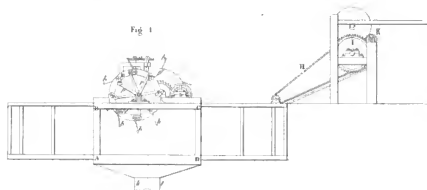
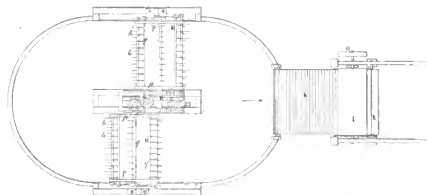


Fig 2



Les Figs. des Figures 1 et 2 sont des vues en perspective.

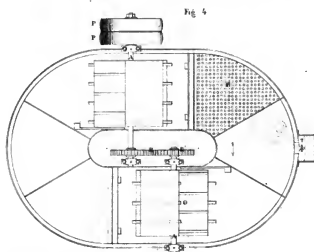
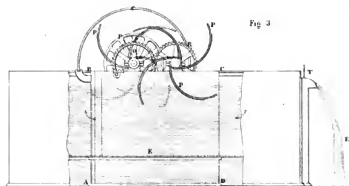


Abbildung der Fig. 3 u. 4. 1/20. 1/20.

Fig 1

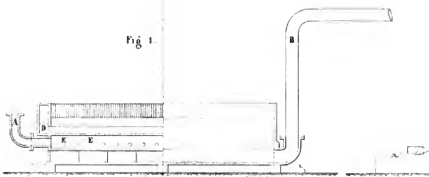
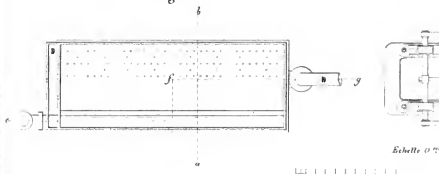


Fig 4



Echelle 0.75

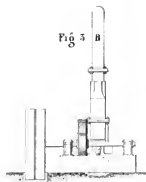
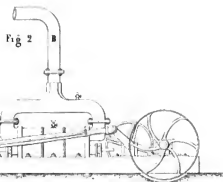
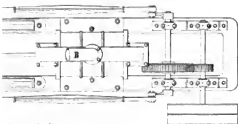


Fig 5.

Fig 6



0 1/2 pouce 1 mètre

1/2 pouce 1 mètre

Machine à sécher la laine.

Ch

Fig 1

ELEVÉ

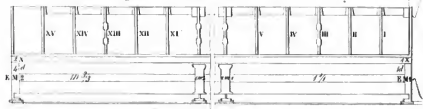
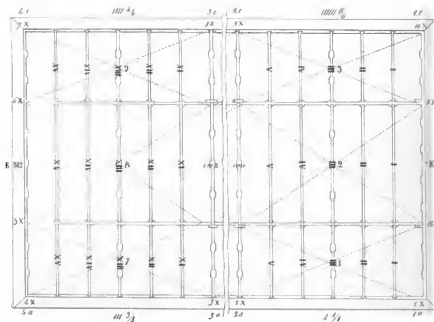


Fig 2

PLAN



D'après le brevet de M. L. L.

sobre de ventilation

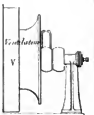


Fig. 4
Chambre de ventilation
Vue du côté A

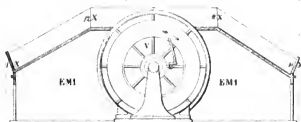


Fig. 5

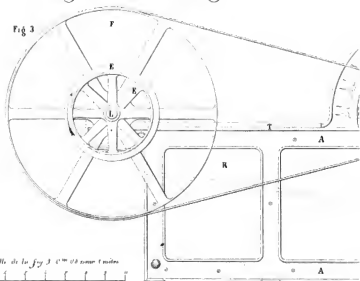
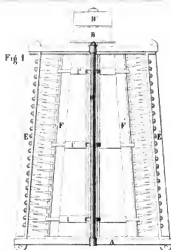
Coupe suivant B B

Chambre

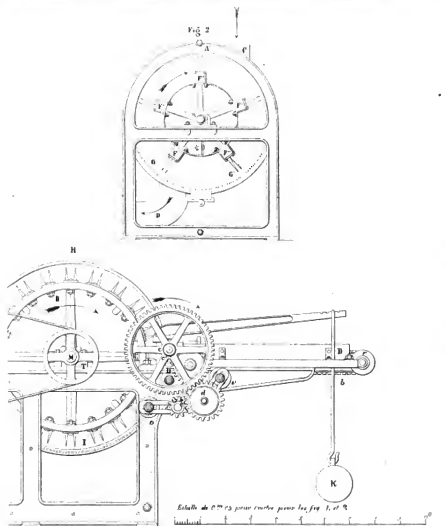


ventilation

Echelle de 0^m 040^m par mètre



Extrait de la notice de la machine



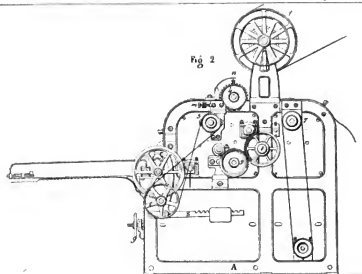
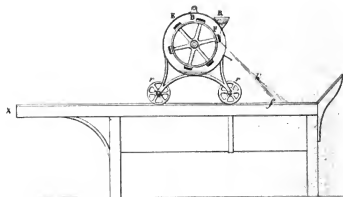


Fig 5.



Chapman & Co.

Fig. 2

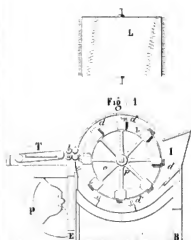
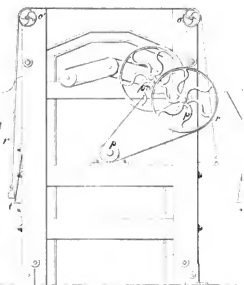


Fig. 5.



Echelle

Echelle

Dessiné et gravé par de L.

Fig 3

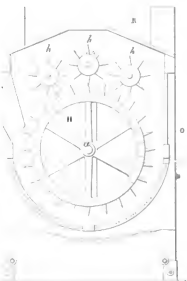
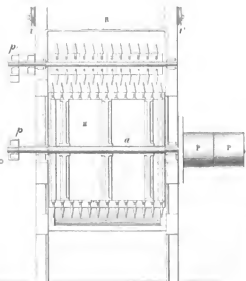


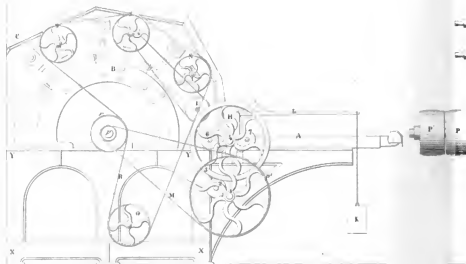
Fig 4



des fig 3 4 et 5
les fig 1 et 2

et de la page 10

Fig. 1



Échelle 1/100 1/2 pouce

Système de transmission

Échelle de 1/100 1/2 pouce

Fig. 3

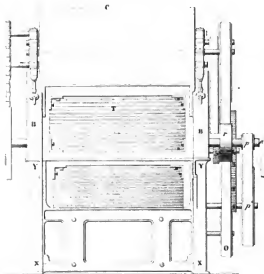
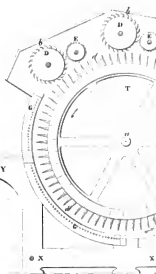


Fig. 2



100 M. P. 100

100 M. P. 100

100 M. P. 100

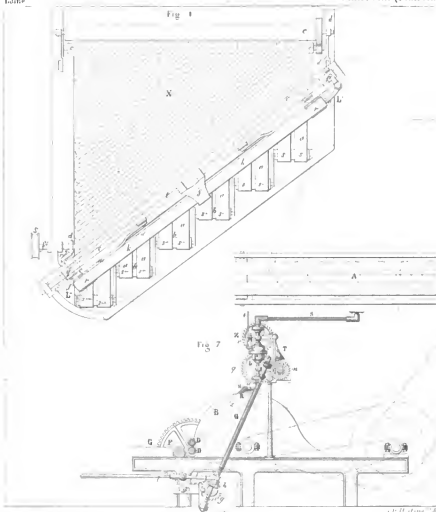


Fig 2

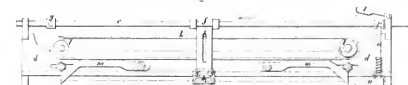


Fig 3



Fig 4



Fig 5

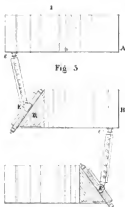
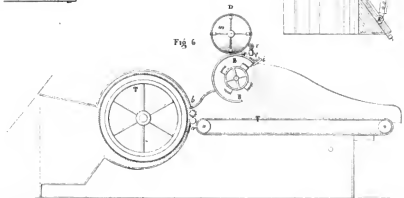


Fig 6



11.317.318

Fig. 1

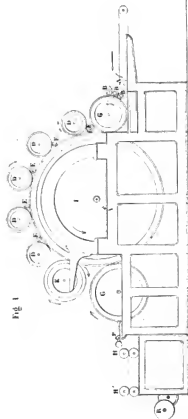


Fig. 2

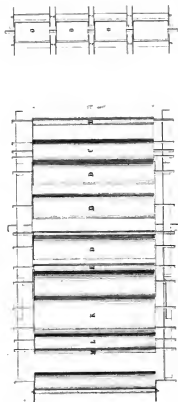


Fig. 2.

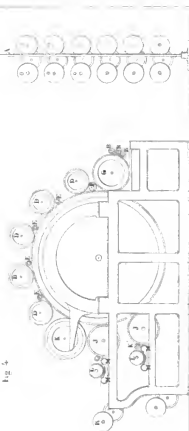


Fig. 3.

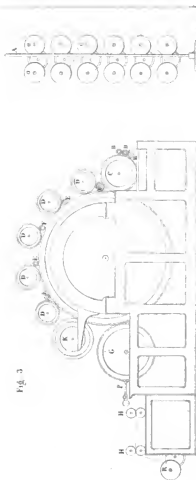
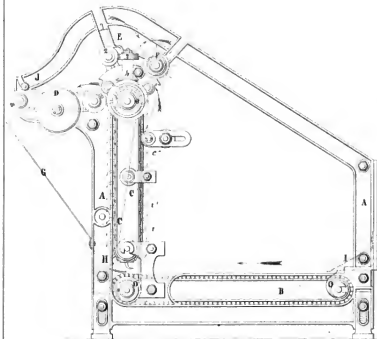


Fig. 2. Fig. 3.

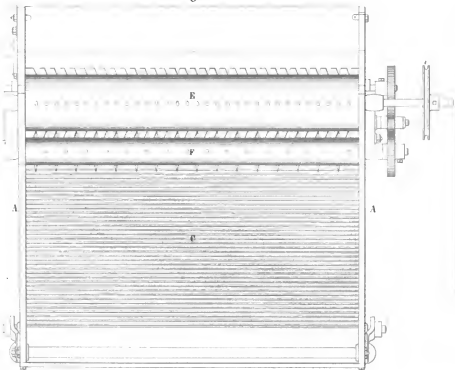
Fig. 2. Fig. 3.

Fig 1

Echelle 0^m

Propriété de l'ingénieur

Fig 2

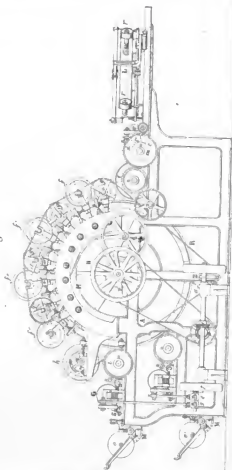


12 pour 1 mètre.

3. Alt et fond de la page



Fig. 1



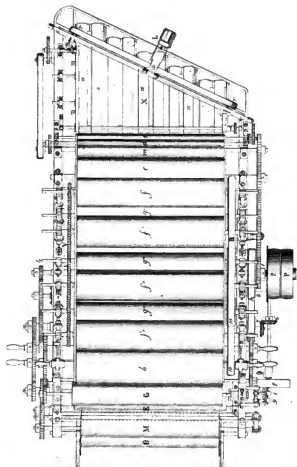
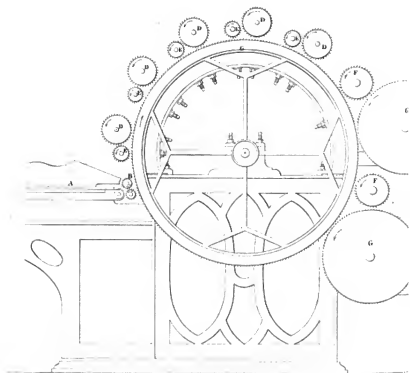


Fig. 1. — Machine for printing on paper.

Fig. 1



Echelle 1/20

Longueur 1 m

Longueur 1 m

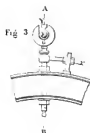
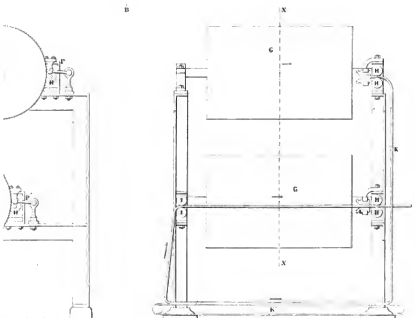


Fig. 2



et pour voir l'objet

1 2 3 4 5 6 7

Le M. A. Rouley a fait

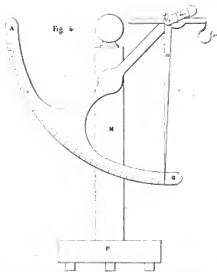
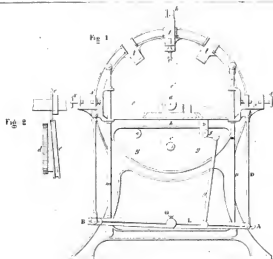
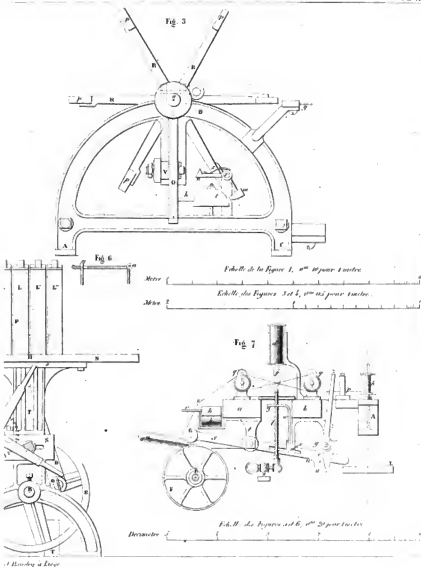


Fig 11' d'après d. A. d. d.



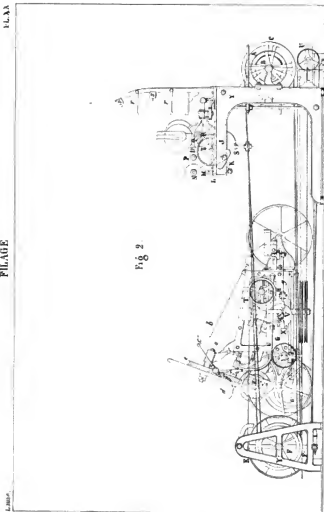
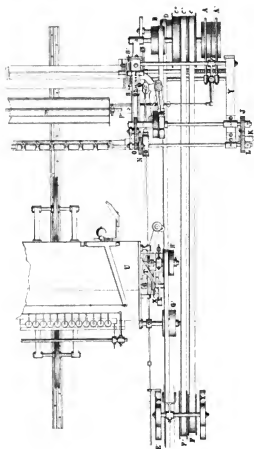
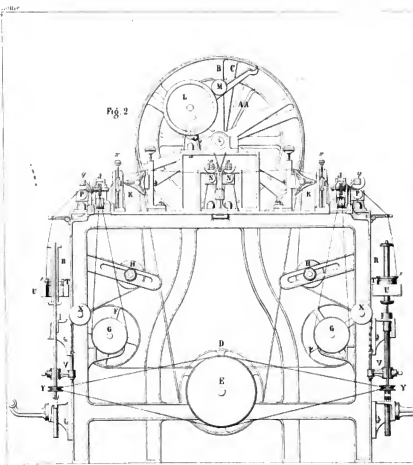


Fig. 1



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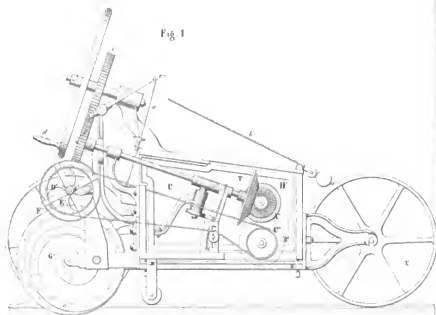


Echelle de la fig. 2 0^m10 pour 1 mètre



Chiffre

Fig. 1



Echelle de la fig. 1. 0^m05 pour 1 mètre



Fig 2

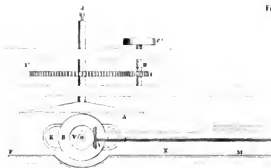
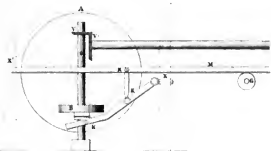
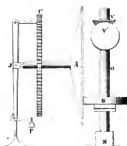


Fig. 3



Fig. 4

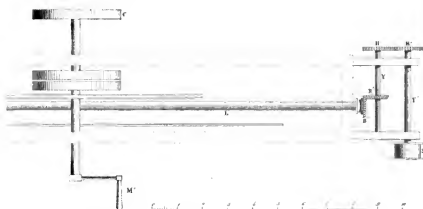
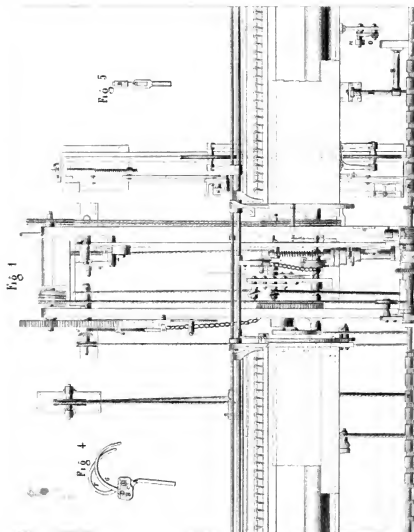


Fig. 5: A technical drawing of a mechanical assembly. It shows a horizontal shaft with various components. On the left, there are two rectangular blocks, one labeled L and one labeled M. A vertical line segment extends from the shaft. On the right, there is a complex assembly with labels H, H', Y, Y', and S. A horizontal line segment with tick marks is shown below the shaft, labeled M'.



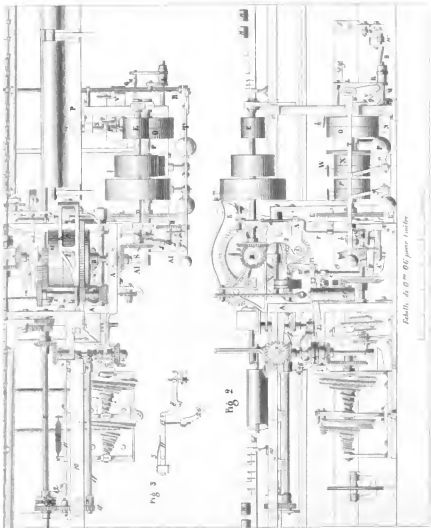


Fig. 2

Machine à vapeur de 0 m 065 pour l'acier

Machine à vapeur de 0 m 065 pour l'acier

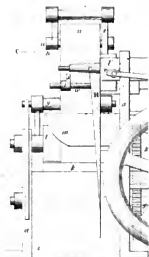
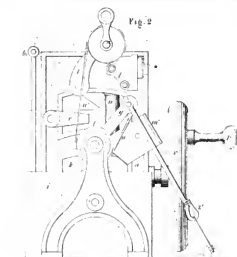


Fig. 3

Fig. 6

Fig. 7

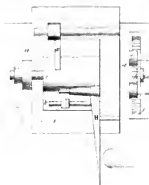


Fig. 11.

H

Echelle de 1^m de haut à basÉchelle de 1^m de haut à bas

Fig. 1.

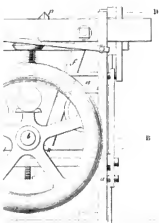


Fig. 3.

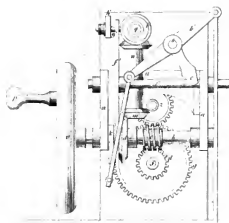


Fig. 4.

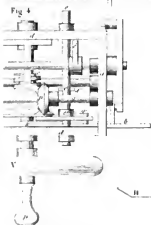


Fig. 8.



Fig. 9.



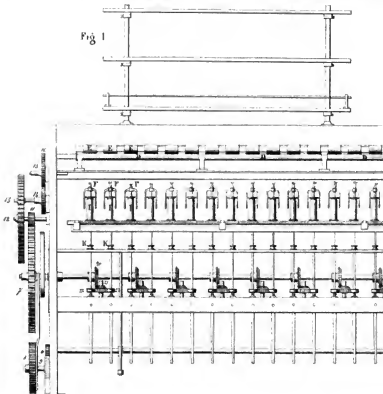
Fig. 10.



Fig. 12.

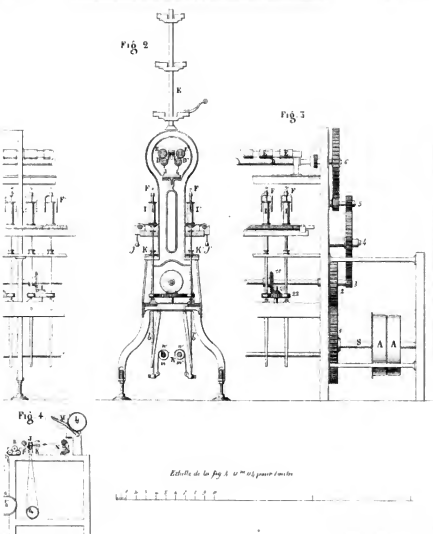


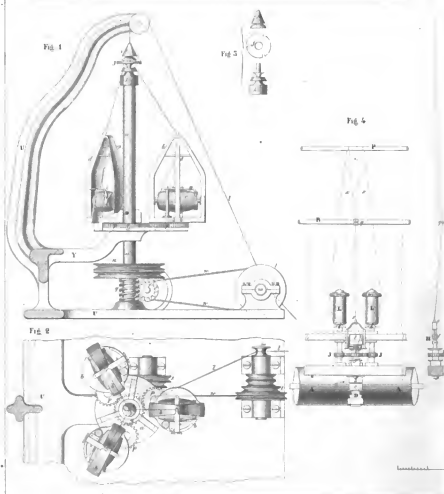
Fig 1



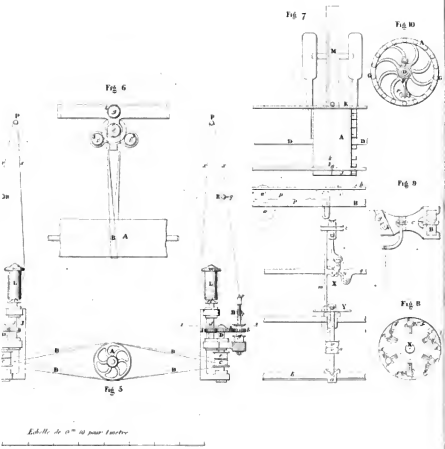
Relevé des fig. 1, 2 et 3 et pour l'usage



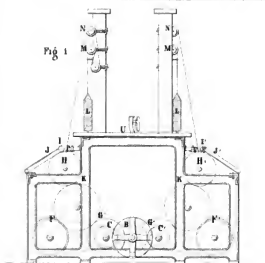
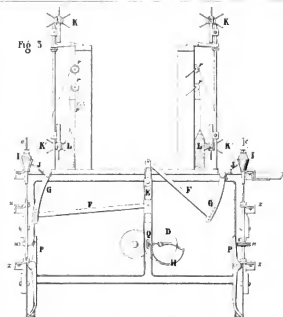


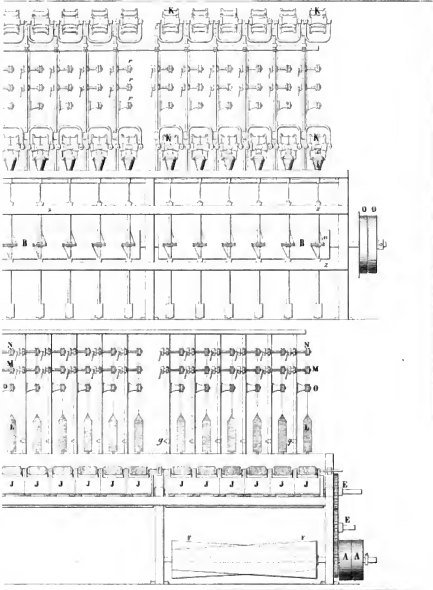


Edt' of corp^m

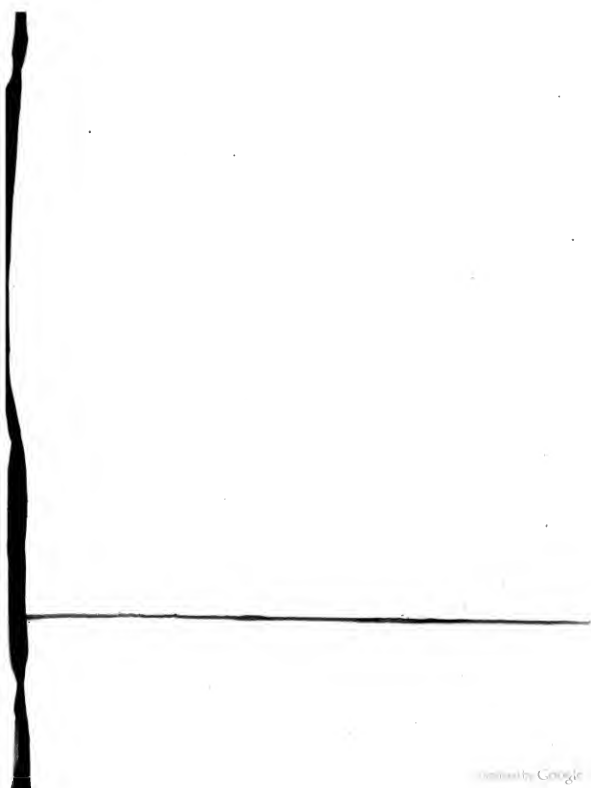


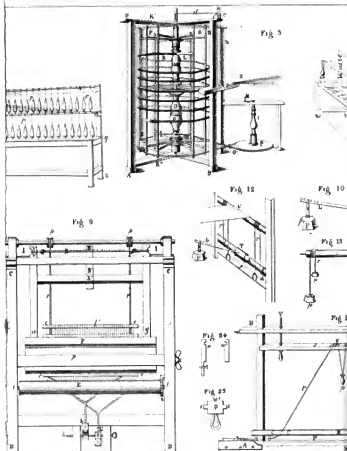
Valvet et Handey a Liège


$$K(\mathbb{A}) \cong \mathbb{A}^n \text{ at } \infty p^{2n} \text{ in } \mathbb{A}^n$$



1517. *Handloom Loom*





Extrait de la page 10

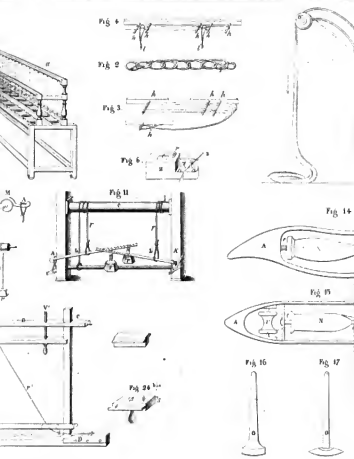


Fig. 1

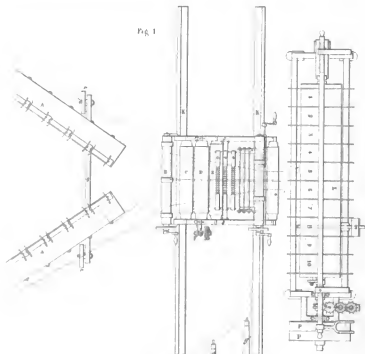


Fig. 4

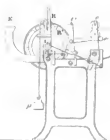


Fig 2

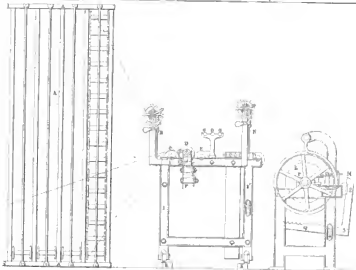
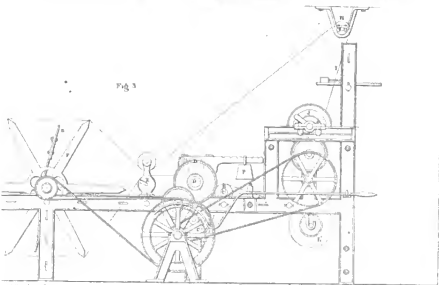
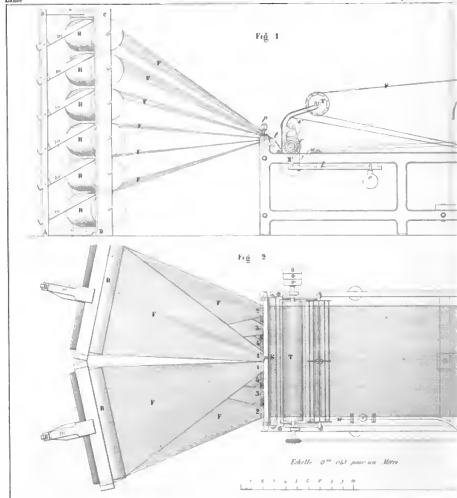


Fig 3



et de Roulogne & Co

Laine



États-Unis et Europe de l'Est

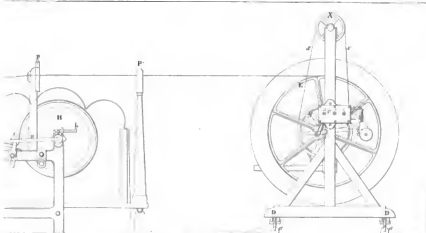
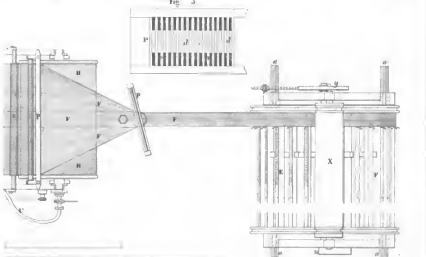


Fig. 3



1 Rouley a large



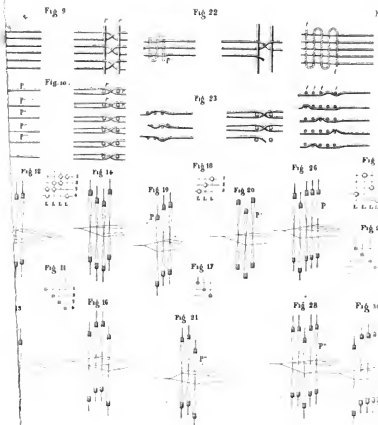


Fig 32



Fig 35



Fig 36



Fig 37



Fig 38



Fig 39



Fig 31



Fig 39 bis



Fig 47



Fig 40



Fig 25

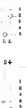


Fig 27

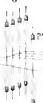


Fig 46



Fig 29



Fig 29

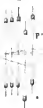


Fig 52



Fig 43



Fig 45



Fig 45

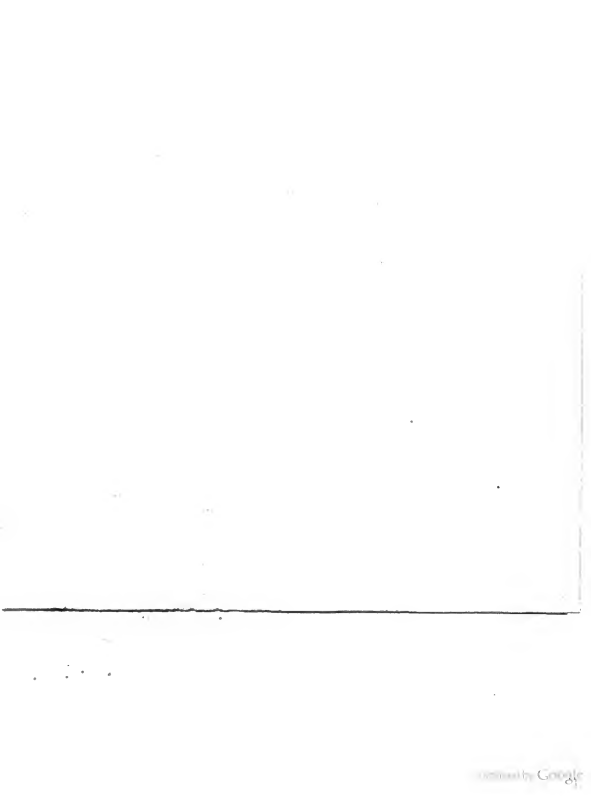


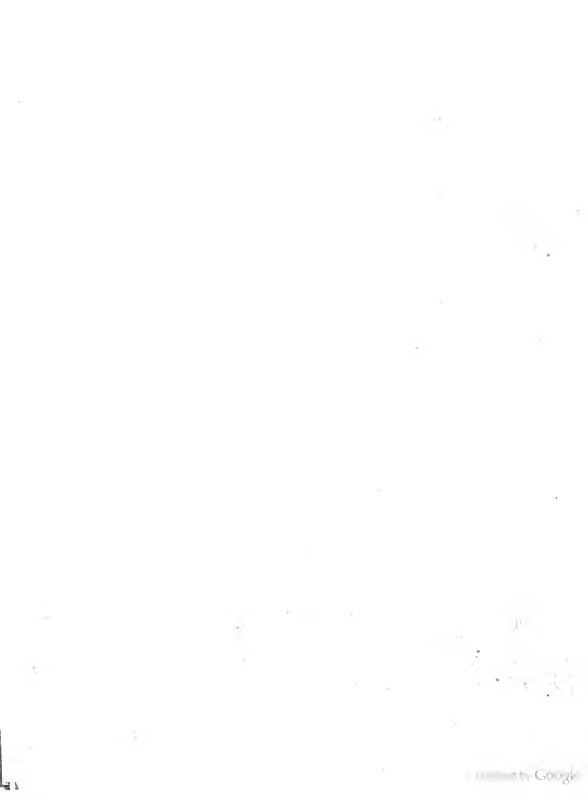
Fig 44

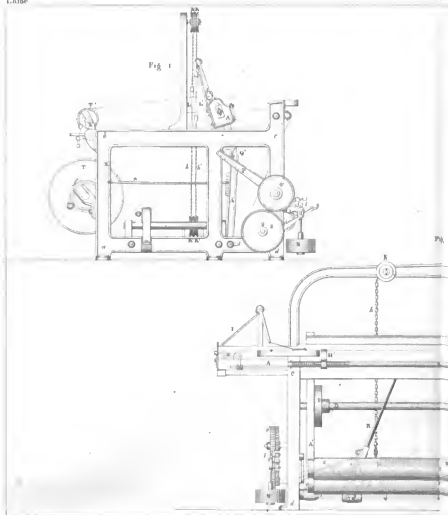


Fig 49









Échelle et resp. de 1/100

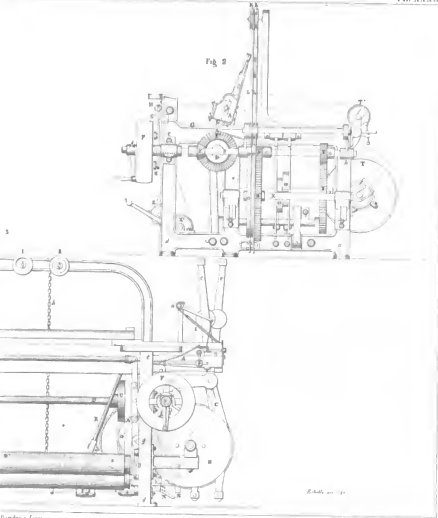


Exhibit 100

Pumping a Large

Fig. 3.



174

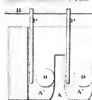
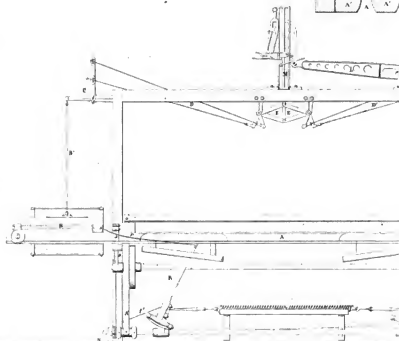


Fig. 1

Echelle sur $^2_{\mathcal{A}}$ *Etalut et voyage*²⁰⁰ de *Arlet et Em*

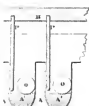
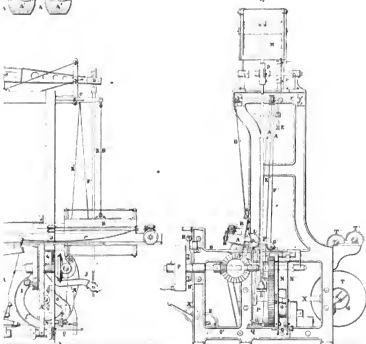
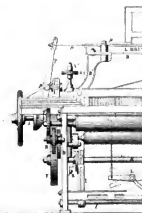
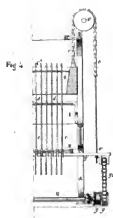
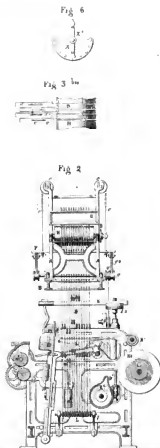


Fig. 4.



Fig. 5.



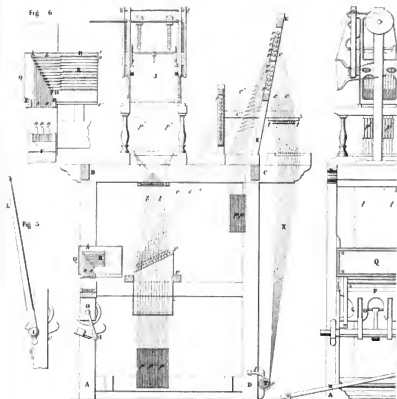


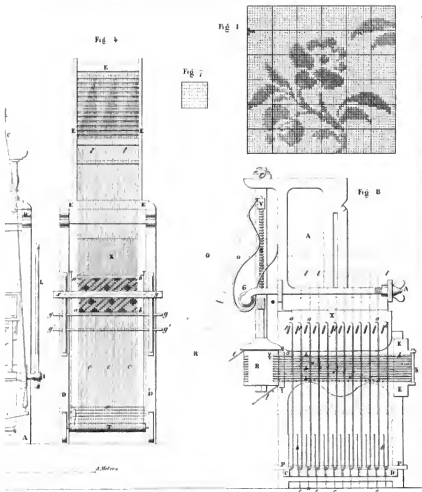
Ensemble de l'appareil pour les Figs 1, 2, 3, 4, 5, 6.

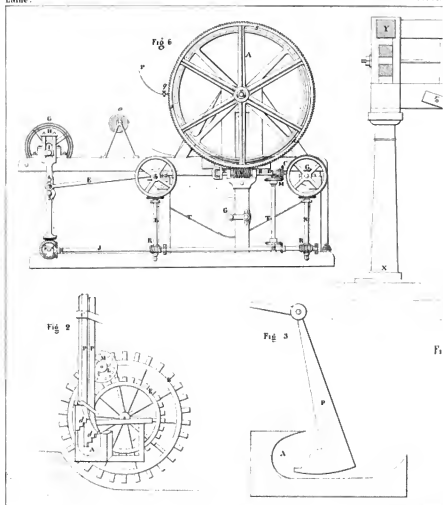
Exécuté et vérifié par le D. 100.

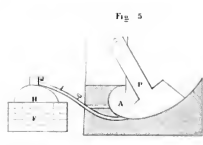
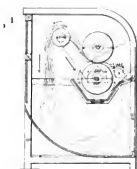
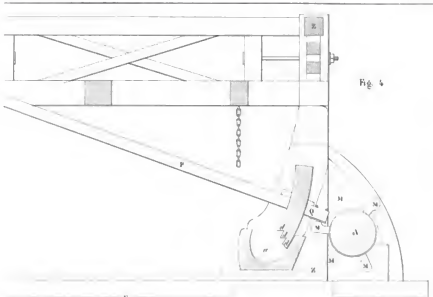
Fig. 2.

Fig. 3

*Elle est en papier blanc*







Échelle de 1/2 mètre pour la Fig. 4, 1/4 mètre pour la Fig. 5.

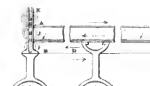
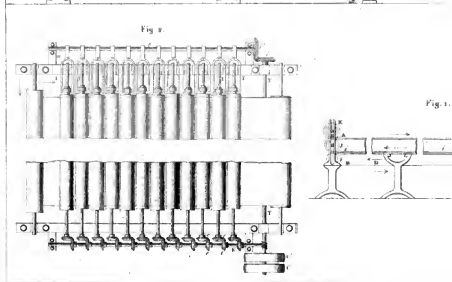
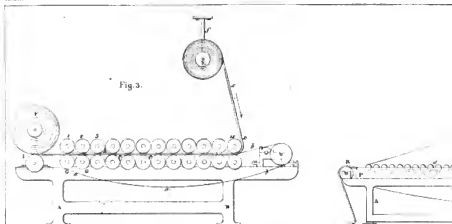


Fig. 4.

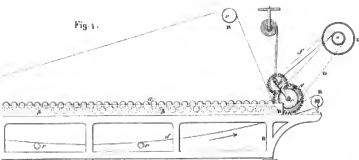


Fig. 5.

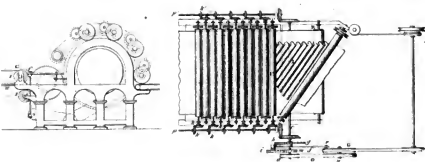


Fig 6

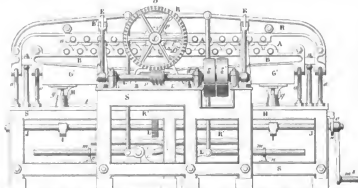
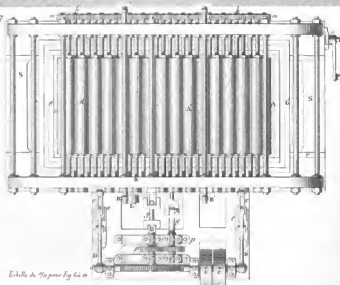


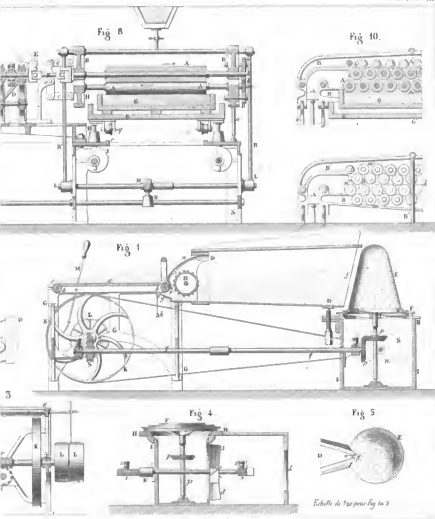
Fig 7



Echelle de 1/2 pouce pour Fig 6 et 7



Plan 1 et 2 coup 1 et 2



de Brandy, large.

Fig. 1

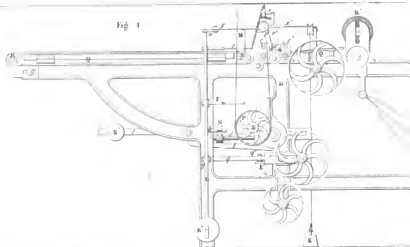


Fig. 2

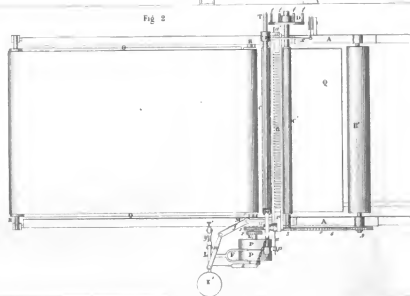
Field⁹ at $\text{exp}^{\text{me}} \leq$

Fig. 3.

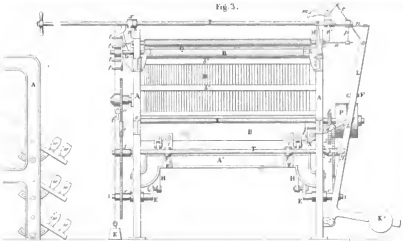


Fig. 4.

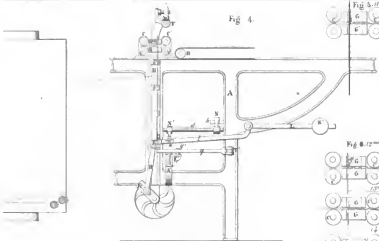


Fig. 5. (1/2 m.)



Fig. 6.

Fig. 6. (1/2 m.)



Handing a Edge.

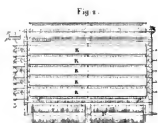
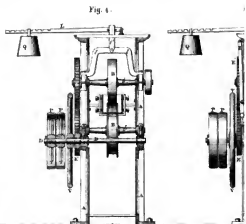
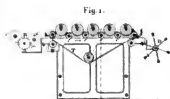


Fig. 3.

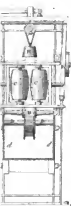


Fig. 5.

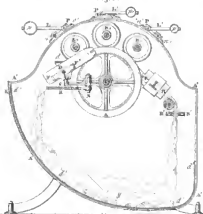


Fig. 6.

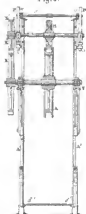
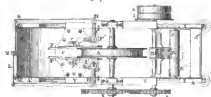


Fig. 7.



Echelle de 0.50 par 1 mètre



Fig. 2.

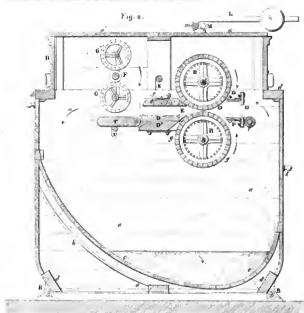
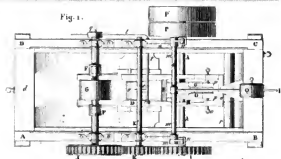


Fig. 3.



Fig. 1.



Echelle de

0.001

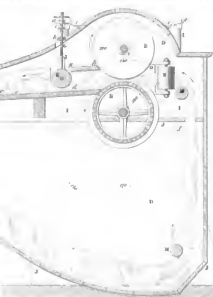


Fig. 4.

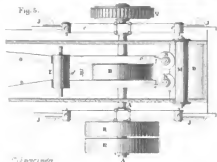
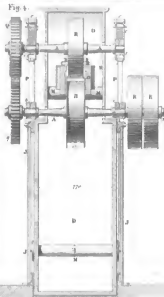


Fig. 6.

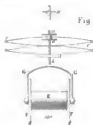


Fig. 7. power roller

Fig. 8. roller of machine large

Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 6.

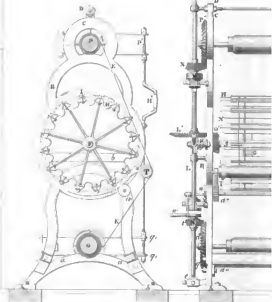


Fig. 6.

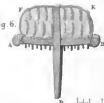


Fig. 9.

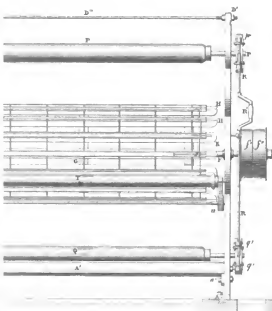
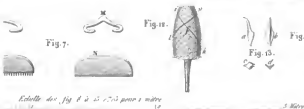
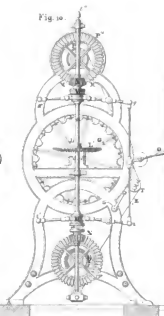
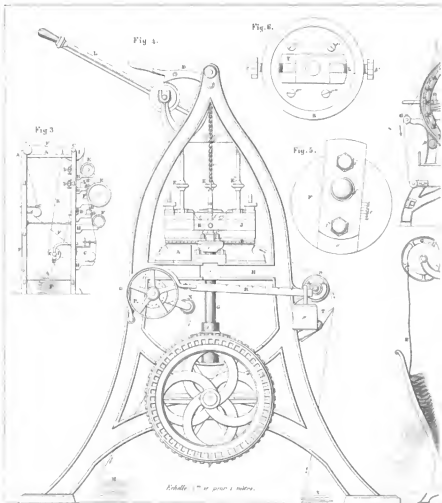
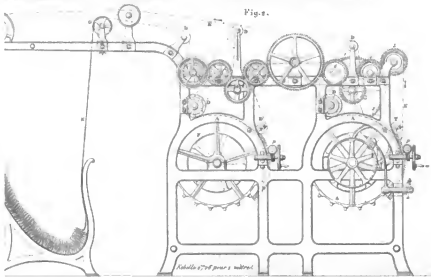
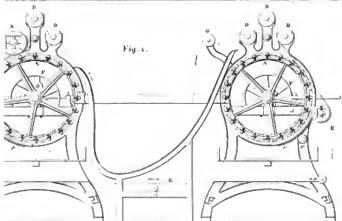


Fig. 10.







et de la pompe à l'usage

Fig 1

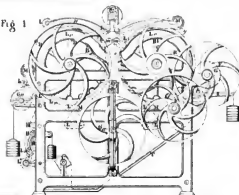


Fig 6

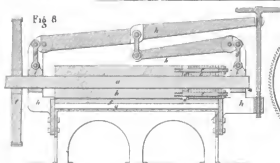


Fig 7

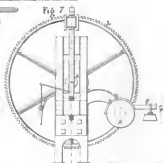
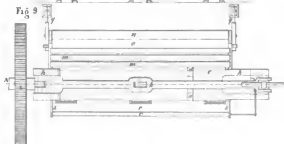


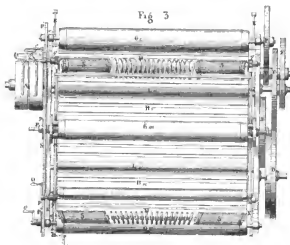
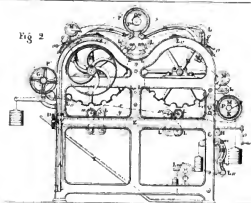
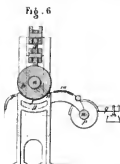
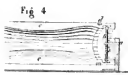
Fig 9



Echelle de

mètres

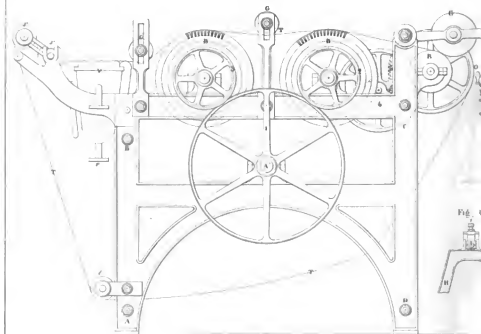
Dessiné par



\mathbb{Z}^n est premier à n nombre.

$\phi = \phi(\lambda, \tau) = \phi(\lambda, \tau, \tau_0)$ is fixed at $\tau_0 = 0$.

Fig. 9.



Extrait et simplifié de Nott et Fow

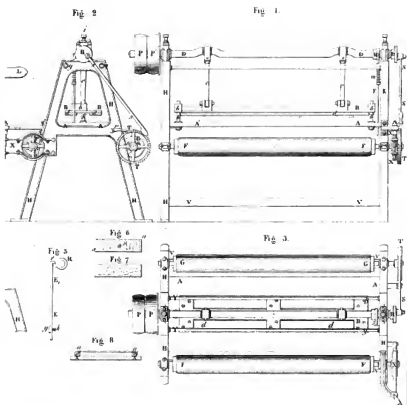
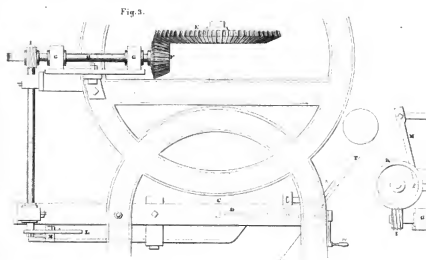
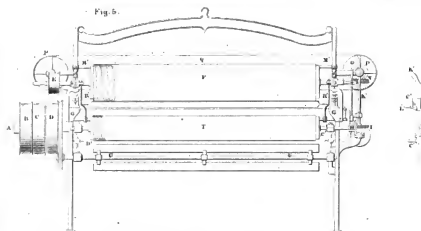
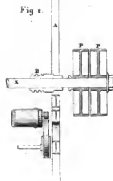
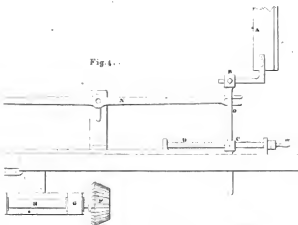
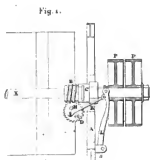
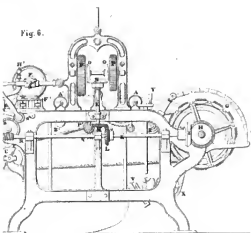


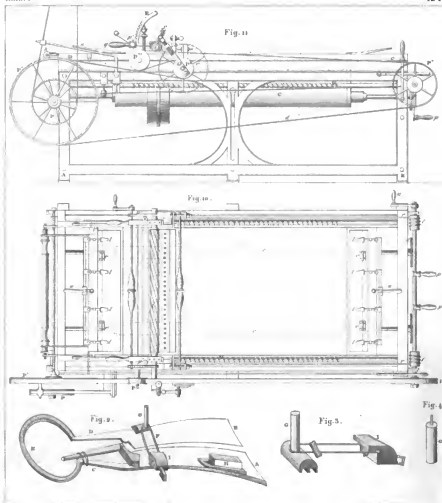
Fig. 1. A large





Échelle des fig. 1 et 2. 2^m cm; pour 1 mètre.
 id des fig 3 et 4. 1^m et 3^m - - -
 id des fig. 5 et 6. 2^m et 3^m - - -





Plan et coup de la machine

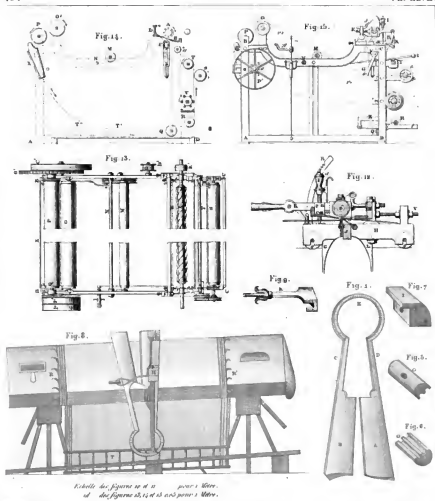


Fig. 3.

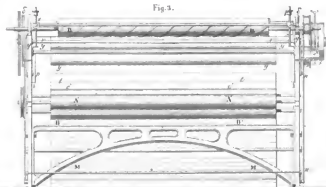
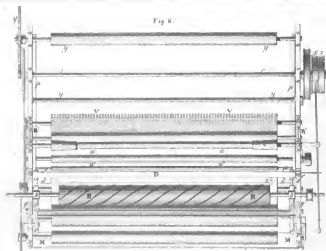


Fig. 4.



Dessin de l'ingénieur.

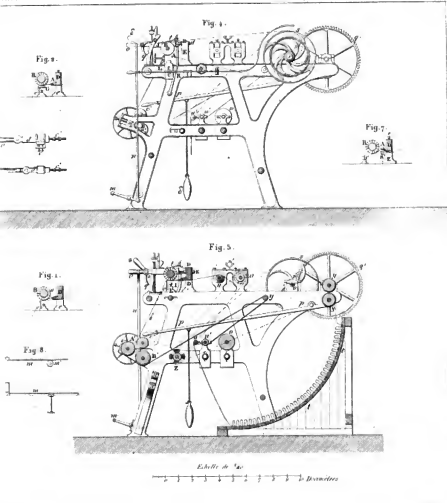
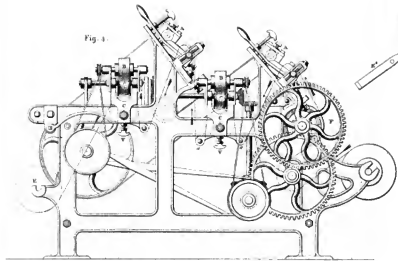




Fig. 2.



Échelle 1/2 m.

Arch. 1/2 m. 1/2 m. 1/2 m.

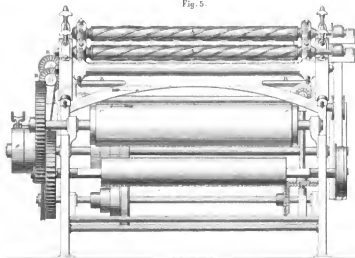
Fig. 2.



Fig. 3.



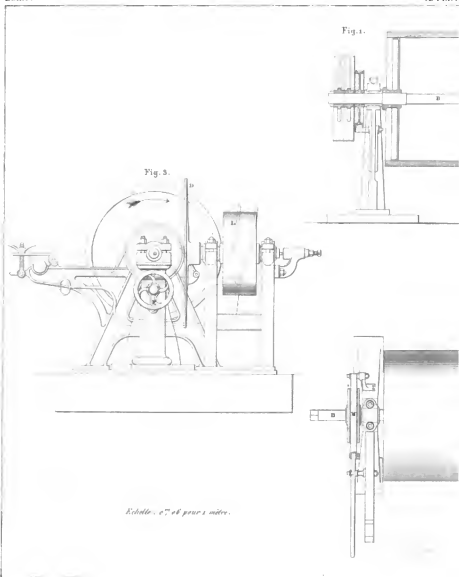
Fig. 5.



100 1/2 inches.

100 1/2 inches.

100 1/2 inches.



Établissements de M. de la Roche

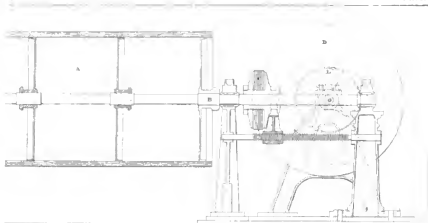


Fig. 2.

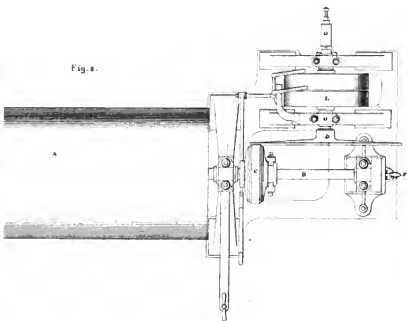


Fig. 2.

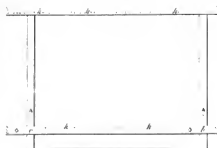


Fig. 3.

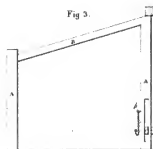


Fig. 4.

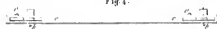


Fig. 11.

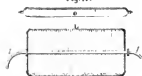
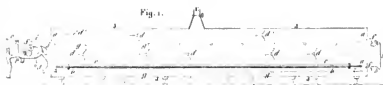


Fig. 12.



l'ordre de la page.

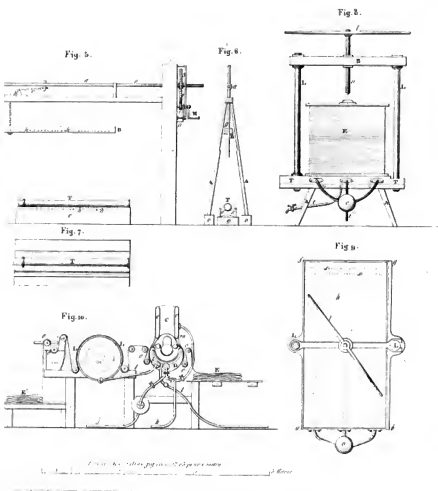


Fig. 2

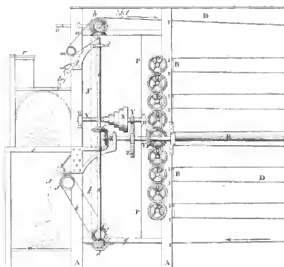
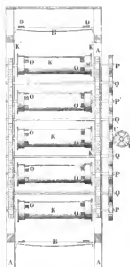


Fig. 5



Fig. 6



Fig. 8



Fig. 7



Fig. 9



Fig. 10.



Fig. 1

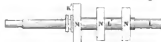


Fig. 1

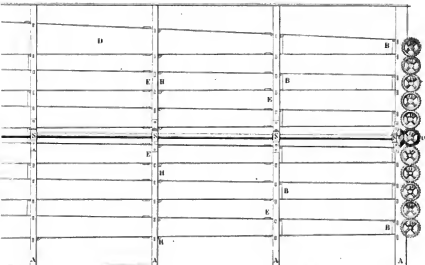


Fig. 4

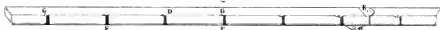


Fig. 3



Echelle des Presses Art 2 0^m 03 pour un Rebre

Laine.

Fig. 1.

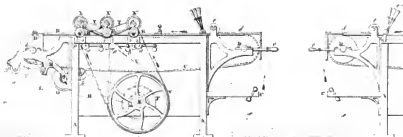


Fig. 5.

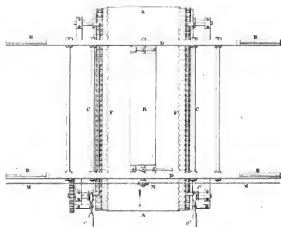


Fig. 4.



Fig 2

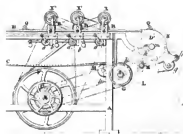


Fig 3

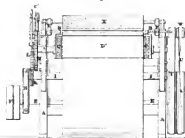


Fig 6.

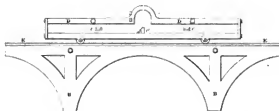


Fig. 8.



Fig. 7.



Fig. 9.

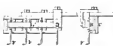


Fig. 10.



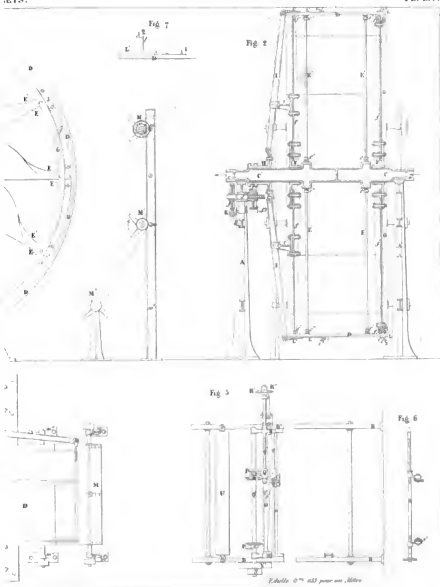


Fig. 1.

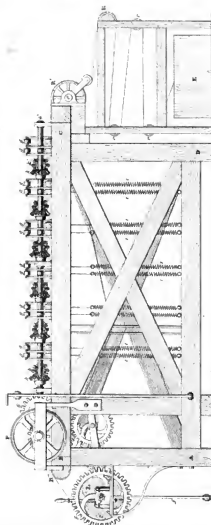
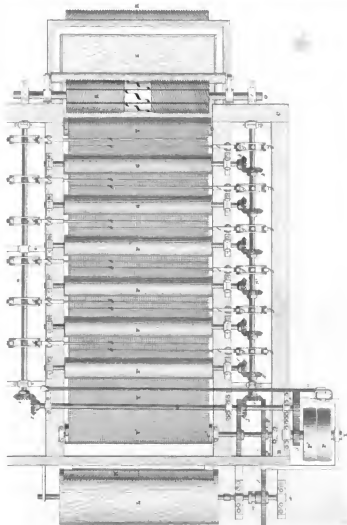


Fig. 2.

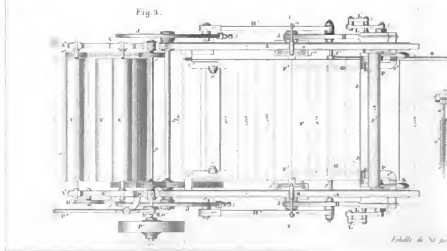
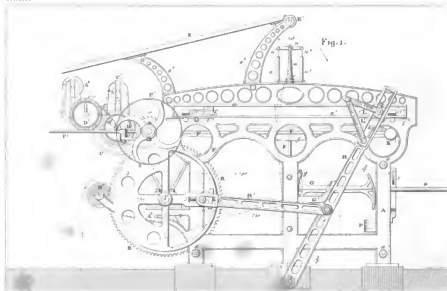




Arrottole de 4' nel giro a motore

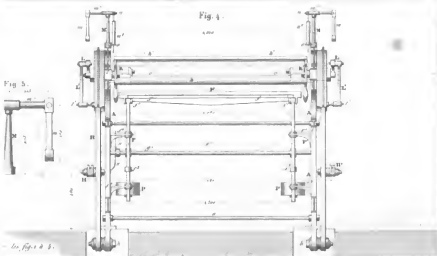
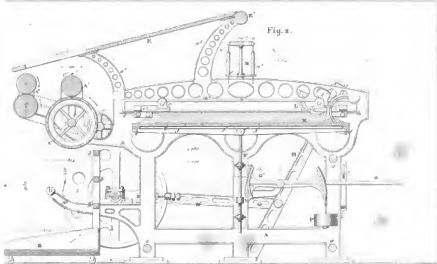
1. Motore

Figura 1a. Spinning. 1. Motore a benzina a 2000 giri



Échelle de 50 mm

ANCIEN ET NOUVEAU



Les figs 2 à 5.

et de l'écoulement de l'eau.

Fig 1

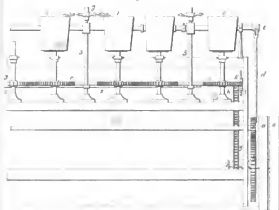


Fig 2

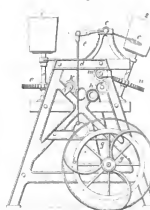


Fig 5

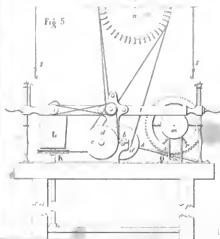


Fig 9

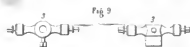
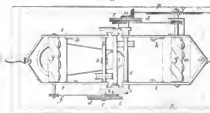


Fig 6



Kocherle - 1872

Fig. 3.

Fig. 4.

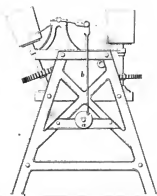
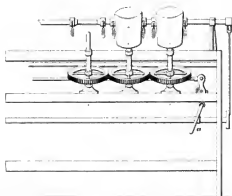


Fig. 8.

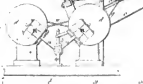
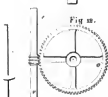
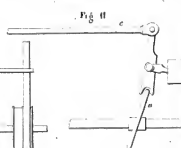
Fig. 10.

Fig. 11.

Fig. 12.

Fig. 13.

Fig. 14.



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